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ABSTRACT

Directed towards academics involved in preparation of distance learning materials, this guide emphasizes the functions of audiotapes within an integrated set of distance learning materials. Planning, production, and evaluation advice is offered, beginning with a discussion of a model approach that focuses on consideration of budget, subject characteristics, tutor characteristics, student characteristics, administrative assistance, arousal and motivation, goal definition, cognitive structuring, signposting, activation, feedback, transfer and retention, assessment, and evaluation. Guidelines for the production process cover scripting (writing style and script structure), and recording from the script (voice, accompanying printed materials, indexing tapes, and interviews). An evaluation checklist includes points concerning the structure of the material, spoken delivery, technical quality, and accompanying materials. Appendices include an outline model of major design considerations for correspondence materials, a summary of advantages and drawbacks of automatic level recording; self-assessment questions; and a sample audiotape script on the topic of producing audiotapes for distance education. (LMM)

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Riverina College of Advanced Education

Audio Tapes for Distance Education

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1st Edition 1984

AUDIO TAPES FOR DISTANCE EDUCATION

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AUDIO TAPES FOR DISTANCE EDUCATION

INTRODUCTION

For almost all subjects the audio cassette can be a practical and inexpensive means of personalising material, providing variety and interest, and presenting information whilst the eyes are occupied elsewhere, or merely resting.

Printed materials do little to convey emphasis, particularly when there are severe limitations in the production facilities available.

Subtleties of language such as pace and inflection cannot readily be conveyed by print, consequently the power of persuasion and the aura of competence are diminished.

Therefore, there are sound reasons why we should supplement printed material in some cases.

However, there are a number of problems concerning the design, production and distribution of audio tapes. To overcome these problems we have to:

(a) choose the right medium for a given purpose

(b) design learning materials appropriately

(c) produce them as professionally as our facilities allow

(d) produce and distribute them in a timely fashion.

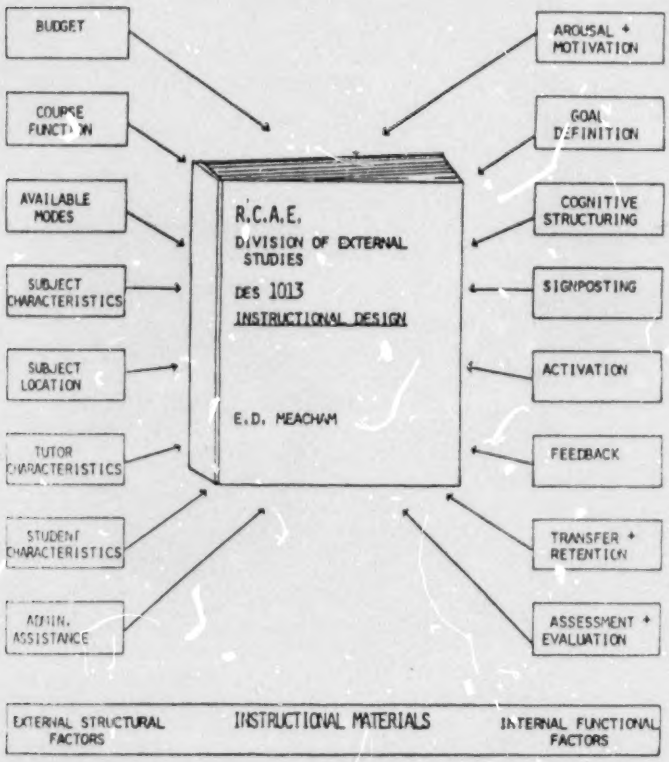
A MODEL APPROACH

To a large degree the making of audio tapes should be considered in the same way as any other teaching materials, so the generalised model below is applicable.

CH. 1 THE MODEL

OUTLINE MODEL OF MAJOR DESIGN

CONSIDERATIONS FOR CORRESPONDENCE MATERIALS



In the specific case of audio tapes, certain categories of the model may be elaborated upon.

(a) Structural Factors

Budget

Is the provision of tapes cost-effective?

Time and money must be considered. Tape making may involve considerable amounts of time better spent elsewhere.

From the student's point of view, equipment may need to be bought, learning is not rapid, and material is not easily located. On the other hand, some students may prefer aural to visual media and learn more effectively, if allowed to exercise their choice.

Subject Characteristics

Is the medium compatible with the subject matter?

Some subject matter is difficult to visualise and comprehend without complementary visual material, e.g. mathematical formulae, complex diagrams, foreign languages.

The important decision is whether or not a tape is appropriate, and if so, should it be accompanied by any visual material.

Tutor Characteristics

Am I able to script and perform for an audio tape?

A careful appraisal of the effectiveness of your spoken voice in this context is needed. It is not the same situation as a lecture or seminar. In many cases it is better for the lecturer to prepare the script and use the voice of someone more familiar with the medium, even though there is some loss in personal contact.

Student Characteristics

Will your students be able to make adequate use of your tapes?

It must be assumed that all students possess or have access to adequate playback equipment, and perceive the audio-tape as a legitimate teaching tool. To assist this, the tape should be integrated fully with other media and be indexed in some way. However, there are some advantages in tapes which can be played alone, e.g. they can be used when driving or other manual activities.

The intelligence, background, previous experiences and aspirations of your students are also most relevant when considering what material to present.

Administrative Assistance

What technical and administrative support am I likely to receive?

Is it important to consider scheduling in this context. Your plan of action must allow sufficient time for working with specialised support services.

(b) Pedagogical Factors

Arousal and Motivation

How can audio material be presented in a way that arouses and sustains student interest?

Try to identify and directly address a typical member of your audience; aim for a conversational style not the formal reading of a paper.

Personalise your delivery, show enthusiasm and humour where appropriate, and use more than one speaker where dialogue is important.

Keep sentences short, avoiding unneccessary words, over-complex grammatical constructions, and excessively dense patterns of information. Speak to express not impress.

Clearly structure the material, emphasise its relevance, link with audience experience.

This link is of critical importance; very few people have a sustained interest in phenomena which cannot be explained in terms of things which are already understood.

Goal Definition

> How can I concisely state the purposes of the audio tape in terms of the students' knowledge, attitudes and competencies?

Make an unambiguous statement relating the content of the tape to student competencies. Explain what is to be learned and why.

Cognitive Structuring

> How can the conceptual framework underlying the material on the tape be made clear to the student?

When using audio material alone, there are problems in relating specific items to the overall context. Therefore, by clear oral explanations or accompanying textual material, the context of any learning must be made clear.

Identify logical divisions in the material. Arrange it in a hierarchy of headings and subheadings.

Use a simple repeated sequence, e.g.

> Introduction - main content - summary - self-assessment

Structure, together with pace and interest are the key factors of producing instructional audio tapes.

Signposting

How can the students be adequately informed about the proper use of the tape?

Information about the lecturer, the subject, the content of the tape and its length must be included. Advice on how to study the material in the tape and the completion of any related exercises is essential. Students frequently need guidance on how long a particular item such as an audio tape should be studied, and in what depth. Such advice may be given in accompanying written material or on the tape itself.

Activation

What can the students do, other than listen passively?

In addition to presenting informational material, it is widely held that an audio tape is more effective if it asks questions and demands responses.

The tape may be stopped in appropriate places for the student to carry out activities which require the application of his knowledge to problems, or the exercise of critical judgement in what has been said. Alternatively it may be useful for the student to summarise the material he has heard, e.g. a student could be asked to:

* answer questions involving facts or values
* detect flaws in arguments
* relate theoretical concepts to personal experience
* anticipate and evaluate arguments
* complete matrices of concepts
* give substantive examples
* apply criteria of truth to arguments.

But remember it's difficult to drive a car or wash dishes whilst actively learning, so a variety of approaches should be considered.

Feedback

> Are audio tapes of any use in providing feedback for students?

Audio tapes can be an effective way of providing feedback. As an addition to a formal grade and a brief formal justification of that grade, more detailed comments can conveniently be included on an audio tape, recorded as the lecturer reads through a particular assignment.

Taped comments are seen by the student as being less threatening and more personal.

In many cases it may be beneficial to 'talk' to students about their individual performances or make a tape with general comments for all students.

However, there are limits of tape usage: e.g. trying to describe a formula or architectural drawing is best done in print.

Transfer and Retention

> Will the students remember what has been said on the audio tape, and apply it elsewhere?

Of course, this cannot be guaranteed, however, various techniques may be used to make this more likely.

Some of the techniques have been dealt with previously, the most important are:

i. have a clear framework for presentation

ii. proceed by way of clear, logical steps

iii. return to all important points

iv. include clear summaries

v. demand application of knowledge

vi. make provision for active learning

Remember to pace your material appropriately, allow sufficient time, say three minutes, for each important point. Do not hesitate to repeat by points if it is considered necessary.

Assessment and Evaluation

Can audio tapes be used in the testing of student progress?

In some cases, where an audio stimulus or response is required, the use of tapes increases the validity of the exercise.

In the testing of language learning, oral and aural skills must be tested appropriately. Similarly, if a student is to analyse or give a speech, the spoken word should be utilised, rather than a written transcript.

In all cases the medium used should be directly relevant to the competencies tested.

Many oral competencies have in the past been given little credit, due to inadequacies in technical equipment. At present the way is clear to increase the testing of such competencies, where they give a significant element in a subject area.

GUIDELINES FOR THE USE OF AUDIO CASETTES

Just as print is much more suitable for some purposes than others, audio tapes have disadvantages and advantages.

DISADVANTAGES

1. Speed of listening is far less than that of reading (unless a word compression is used - then problems arise with density of information).
2. It is more difficult to deduce meaning from context.
3. The overall structure of the material is difficult to envisage.
4. Retrieval of specific information may be problematical.
5. Time and cost factors may be prohibitive.
6. Students do not always see it as a legitimate mode of teaching.

ADVANTAGES

1. Communication may be personalised.
2. Dialogue can be naturally presented.
3. Pacing and inflection may enhance communication and emphasis.
4. Audio cassettes can complement visual material.
5. Essentially oral content is best communicated in its original form.
6. Cassettes can be used in a wide variety of physical situations, including those where the student is otherwise physically occupied.
7. Cassettes are re-usable, easy to store and cheap to despatch.
8. Novelty has a motivational effect.
9. It is a preferred mode of instruction by some students.

GUIDELINES FOR THE USE OF AUDIO CASSETTES

The Unsatisfactory Use of Audio Cassettes

A major use is the recording of lecturers and monologues (frequently poorly) with discordant background noise and unstructured presentation.

Poorly structured lectures, badly recorded are not effective. Remember, in general, live lectures are:

* of poor technical quality
* addressed to a mass audience
* reliant on visual cues
* too long to listen to in one session
* often lacking in tight structure.

Recordings made at home by lecturers are frequently similarly ineffective, especially when they are poor quality recordings of dull monologues with disjointed content.

Furthermore, excessive use of cassettes within one subject is highly suspect, as it is unlikely that one medium is suitable for the achievement of all objectives. The choice of medium should be intimately linked to the choice of objectives.

Do not use audio cassettes for:

Long monologues, straight factual material, or administrative material to be constantly referred to.

Examples of Effective Use of Audio Cassettes

1. Personalised introduction of the lecturer to the student.
2. To guide the student through the instructional material, thus giving an overview of the subject. Pages in the material are referred to, and specific important aspects are highlighted.

3. Particularly stimulating lectures may be taped, but they must be clearly recorded.

4. They are essential for subjects concerning certain performing arts, e.g. music, play and poetry reading, also language courses.

5. Cassettes are effective in reproducing discussion or debate.

6. Cassettes and printed material may be combined effectively, where the printed material consists largely of charts, slides, flow-diagrams and calculation. The cassette can direct the attention of the students to various aspects of the charts etc. and guide their thinking as they progress.

7. Cassettes may be used for a personalised commentary on formal assignments.

8. Cassettes may be produced by the students for assessment purposes, e.g. where an audio-performance such as a public address or instrumental performance is to be assessed.

In all cases, scripted studio recording will give, where possible, better quality and less variability of content.

Do not use tapes where print is more effective.

COPYRIGHT

Remember that the copyright act applies to taped materials as well as those reproduced in print form.

Be particularly careful about reproducing whole works, e.g. pieces of music, poems. Such reproduction will attract heavy fees.

Keep to small portions of works and provide full bibliographic details.

THE PRODUCTION PROCESS

(a) Scripting for Audio Tapes

Writing Style

Although the same basic principles of good communication apply, there are considerable differences between writing articles, lecture notes, books and tape scripts. The crucial point is that, unlike a printed article, the tape script will be heard and not seen by the audience. Therefore, you should 'write for the ear', not for the eye.

To illustrate this, read a journal article or textbook aloud. How does written style translate into an oral presentation?

The answer is frequently not well, as anyone giving an oral conference presentation of a paper meant primarily for a journal will testify. Similarly, consider why lectures 'straight from the book' are badly received. So, a script written like a text, will sound like one or a lecture.

Tapes, like radio may best be regarded as an 'intimate medium', where the ideal is a personal conversation between the speaker and the listener.

Consequently, the script should be based on the idea that you are talking to a single individual, and conveying something of great interest and importance.

Personality plus ideas should be communicated, carefully choosing words and phrases for their spoken effect. Use a conversational style which may include expressions not found in most written language.

It is important to vary your tone of voice in order to stress important points, and return to new and important ideas, as unless the student keeps replaying the tape, his experiences with it are extremely transient.

Remember! your writing is for speaking so:

- avoid lengthy complex sentences
- speak words before finally scripting them

- choose words which both convey appropriate meaning and sound right
- be natural, use words which are familiar to you in your spoken language
- punctuate for sound not sight, e.g. . . . pause
- type or print clearly
- use wide spacing
- clearly separate distinct segments.

Structure of Script

Try to include the following in your script:

i. Introduction

- aims - motivational and content orientation
- overview
- context within subject
- arousal of interest

ii. Clearly stated objectives

- student competencies
- what should students know/do after listening

iii. Logical subdivision

- list of contents and sequence
- indication of importance

iv. Clear explanation of technical terms

- define new vocabulary
- make meaning clear by context
- add glossary of terms

v. Summary of main ideas

- revision
- repetition

vi. Questions and requests for responses

- self-help questions
- summary questions
- checklists.

Aim for a series of basic learning units each covering a major point and sufficient supporting detail to establish it as clearly as possible.

(b) Recording from the Script

In considering how the recording is to be presented, certain listener difficulties should be considered:

* unless accompanied by visual material one sense only is being used, this increases the potential for boredom and distraction
* it is difficult to anticipate structure
* it is difficult to remember structure
* it is difficult to refer back to specific passages unless they are indexed
* it is difficult to absorb high densities of information through one medium
* a quasi-personal relationship promotes efficient learning.

If the script has been appropriately written, then its intentions must be translated into a sound medium.

Voice

Making the tape.

Unless there is accompanying printed material, remember that all your information is conveyed by sound, so considerable variety of voice may be required.

Speed, pitch and level of voice must be varied to suit material: do you wish to exhort, inspire, inform, judge? each requires a different voice.

Try to project your voice at an imaginary listener situated about 2-3 metres away. Speak from a sitting position, not hunched or cramped.

It is usually better to script comprehensively and read all the material recorded, rather than ad libbing.

Try to read about one line ahead of your speech and pay particular attention to marked emphases and pauses.

Place the microphone about 20-30 cm away, and do not blow into it.

Speak directly to the microphone and address it as a person, using a normal speaking speed of about three words per second.

When making the tapes, keep these points in mind:

i. your voice should be used as if you were speaking to an individual on a one-to-one basis

ii. do not imitate a performance at a mass lecture

iii. vary both your delivery and the demands expected of the students

iv. encourage active participation by the student, focus on critical thinking

v. the introduction is of crucial importance. Clearly state at the outset, the mass concepts, context, authorities and related materials.

vi. work from familiar to unfamiliar ideas.

vii. clarify and emphasise critical points

viii. limit content to the essential

ix. try to sound knowledgeable, enthusiastic and approachable.

x. use a conventional style with simple sentences - no verbal mazes - and normal speed of delivery (about 180 w.p.m.).

Accompanying Printed Materials

There are many instances where printed material, especially in the form of charts, diagrams, accounts, photographs, formulae etc., should accompany audio materials.

A dual or multi-media approach is generally better for holding the attention of the student. Research data implies that the use of more than one type of sensory presentation is usually an aid to learning.

However, some flexibility is lost in that as the visual senses are used it is impossible to use the tape to its fullest advantage while driving a car, or doing housework etc.

Printed materials usually should include:

(a) a synopsis of the topics used in the tape or more detailed statement of content

(b) a statement of objectives

(c) statement or model locating the taped material within the total subject or course

(d) an annotated list of references

(e) self-testing exercises

(f) any essential visual material: charts, diagrams, accounts, cartoons, photographs, art prints, formulae, models, statistics, etc.

Indexing Tapes

The indexing of tapes is a recent innovation. It enables reference to the contents of the audio tapes in the same way as you refer to the page numbers and table of contents in a book in order to have quick and accurate access to specific information. It works this way.

On side one of the tape is the recorded program, on side two are consecutive numbers five seconds apart.

The index numbers are in descending order, this is because of the way cassettes record information - side one is recorded in one direction and side two in the opposite direction. You will find

that the numbers in descending order will not bother you - it takes no time to get used to them.

When you wish to locate a particular section of side one and do not wish to listen to the complete tape, first consult the Contents and Index sections, which should accompany the tape in print form. Find the particular topic and index number and insert the tape on side two.

Using the fast forward or reverse buttons, run the tape and periodically play the tape at normal speed, listening to the index numbers. With a little practice you will become expert at running the tape and stopping very close to the required numbers. Within a few numbers play the tape at normal speed. At the desired number stop the player and turn to side one - you will be at your topic.

Interviews

Scripting is equally important in the case of interviews. However, the flexibility of response allowed to the interviewee must allow the interviewer to react to answers.

Nevertheless the basis of the interview should be a series of thoroughly-prepared questions.

These questions should be direct, short, delivered singly and in a logical sequence.

They should bring out:

(a) what the person interviewed has to say

(b) what the listeners need to know

(c) what the interviewer considers important.

Above all, the purpose of the interview should be clear in the minds of everyone concerned and not digressed from.

TECHNICAL ASPECTS OF TAPE PRODUCTION

The operation of the technical equipment used for the production of audio tapes is beyond the scope of this paper. However, it could be advantageous to briefly look at some misconceptions regarding equipment and facilities.

It is commonly believed that a single microphone can be placed in a room to pick up all sounds in that room with equal clarity and intensity.

A microphone with an omni-directional pick-up pattern is equally sensitive to sounds from all directions however, as a microphone is a square law device, doubling the distance of the sound source from the microphone will quarter the sound picked up. Equal loudness will only be achieved if the intensity of the sound sources and their distance from the microphone is equal.

But do you really want to pick up all the sounds in the room? One omni microphone does not have the ability to differentiate between the wanted and unwanted sounds that occur within a room. The air conditioning, natural reverberation of the room and many other extraneous sounds become noise which interferes with the wanted sound which is communicating your message.

At the other end of the scale it is believed that a shot gun (highly directional) microphone will pick up only the sound it is pointed at.

Microphones are available with differing directional characteristics varying from the extremes of the previously-mentioned omni-directional, to the highly-directional gun microphone. There is however, no microphone which will, in a normal environment, pick up only one sound source from amongst many. No matter how directional a microphone is, it will still pick up sounds outside of its primary pick-up pattern; these will be at a reduced intensity, but they will still be there. Sounds are also reflected around a normal room, so regardless of the directional characteristics of the microphone sounds may be reflected into its pick-up area.

It is also commonly believed that good quality recordings can be easily made at home or in the lecture theatre.

With planning and understanding of technical constraints good recordings may be made in most situations. One must consider however, what constitutes a good recording - a jumble of sounds from which a message can be deciphered with difficulty, or a recording of various sounds which communicate directly without extraneous interferring sounds? Obviously appropriate background noise can add to the communication quality of a recording but generally,

extraneous noises are not welcome and this is one of the reasons that recording is usually done in a studio. The acoustic design of a studio also enables selection of the most desirable microphone for a given situation allowing better overall sound reproduction to be obtained.

The control room facilities which are generally associated with studios enable greater manipulation of the audio medium. Equipment usually includes one or more turntables, reel-to-reel recorders, cassette recorders, a variety of microphones and a mixer.

This equipment enables a range of pre-recorded material and live sources to be mixed together to form a composite programme.

Cassette recorders are not often used as they frequently lack the fidelity required for good communication. Professional or semi-professional reel-to-reel recorders not only have superior characteristics to cassette machines but offer greater ease of manipulation when editing.

It must be understood that no recording system can duplicate the facility which our ears and the grey matter between them offers. The finest stereo system reproduces marvellous depth and clarity of sound but even this only approximates the original.

The skill of recording is to use a limited technical resource in such a way as to provide an illusion of reality. This can only be achieved through an understanding and manipulation of all the components involved. When you are first involving yourself with production of teaching tapes you would be best advised to work with a technical producer who can handle these aspects for you.

SUMMARY

Robert Hains summarises his advice for Open University tutors producing tutorial tapes for science students in the following manner:

Teaching Technique on Tape

You will need a fairly detailed script to produce a good tape, where your words flow smoothly without frequent pauses for thought. 'Um's' and 'Er's' and quite brief silences that would not be noticed in ordinary conversation sound very awkward on a tape, as also do repetitive speech manerisms like 'I mean to say' or 'As a matter of fact'.

The speed of delivery should be carefully checked. It may need to vary according to what is being said, but either too slow or too fast a pace will make it difficult for the listener to concentrate on the material being delivered.

It is to be hoped that your voice conveys a warm friendly impression. In an introductory tape this is important, to give a student confidence in the tutor he or she may never see, but who will be marking and commenting on assignments. A good contact at this stage will give the student lasting encouragement throughout the course. A few words of introduction of yourself and the course and an assurance of your willingness to help sort out any difficulties will be most beneficial to the student. Once you have introduced yourself, start with a review of what is to be covered in the tape, and advise the students what supporting material they will need - units, assignments, calculator, etc. The tape can be used to talk students through difficult equations or diagrams, or they can be told to switch off while they do a calculation or solve a problem. Difficulties connected with the course or assignments raised by students can be discussed, too. You can also coment on any common misconceptions or errors you noted in marking the latest work. The actual teaching material covered in the tape will depend on the course, but the tape should end with a summary of the ground covered and the main conclusions reached. A few friendly concluding remarks of farewell give a final good impression.

EVALUATION OF AUDIO TAPES

Having made a draft copy of the tape, it is helpful to make an evaluation of it.

The evaluation at this stage is not based on student reaction but on the considered opinions of several individuals who have some knowledge and expertise in the area.

The lecturer and the audio technician are the obvious first choices in this exercise, however, their views should be supplemented by informed outside opinion.

After the tapes have been circulated, it is then advisable to evaluate their effectiveness by monitoring student opinion, using a more open-ended approach.

Here is an example of the type of evaluation instrument which could be used.

EVALUATION CHECKLIST

The Structure of the Material

With respect to the tape you are making, estimate the degree to which you feel you agree with the following statements.

	Agree				Disagree
	1	2	3	4	5
1. The educational objectives for the tape are clearly stated.	1	2	3	4	5
2. The content of the tape is relatively clearly related to the objectives.	1	2	3	4	5
3. The student's interest is likely to be aroused and interest maintained.	1	2	3	4	5
4. The material encourages critical thinking.	1	2	3	4	5
5. The material requires active learning by including questions, problems, activities, etc.	1	2	3	4	5
6. The main body of content is appropriately introduced and comprehensively summarised.	1	2	3	4	5
7. Critical points are clarified and emphasised.	1	2	3	4	5
8. The material unfolds in a structured, logical sequence.	1	2	3	4	5

	Agree				Disagree
	1	2	3	4	5
The Spoken Delivery					
9. The material is communicated in a conversational tone.	1	2	3	4	5
10. The tone of voice is varied, with adequate emphasis where required.	1	2	3	4	5
11. The lecturer speaks cheerfully or dramatically as appropriate.	1	2	3	4	5
12. The lecturer's enunciation is clear, with no distracting speech habits.	1	2	3	4	5
13. Sentences are short and to the point.	1	2	3	4	5
14. Technical terms are spelt out and included in a glossary.	1	2	3	4	5
Technical Quality					
15. The volume remains constant, without fade.	1	2	3	4	5
16. There is no extraneous recorded background noise.	1	2	3	4	5
Accompanying Materials					
17. The tape is appropriately indexed.	1	2	3	4	5
18. Any visual materials used relate clearly to the tape and its objectives.	1	2	3	4	5
19. All material needing frequent references is presented visually.	1	2	3	4	5
20. Printed material shows links with the whole course.	1	2	3	4	5
21. Main concepts are summarised in print.	1	2	3	4	5
22. Exercises and activities are presented in print form.	1	2	3	4	5

PRODUCTION SCHEDULE

To maintain an orderly flow of material it is necessary to work within a production schedule linked with that of any accompanying printed material.

Production Schedule

Deadlines	Autumn Semester	Spring Semester
1. Outline to External Studies	Mid-September	Mid-February
2. Contact Educational Services	September	February
3. Tape to Goulburn	End of December	Mid-June
4. Posted	Mid-February	Mid-July

1. Lecturers are required to give an outline of their tapes to the Division of External Studies, at the same time as their written material. Information about the tapes would then be included with the written material.

2. Contact to be made to arrange a production schedule and receive technical advice.

3. Packaging and collating required prior to posting.

4. Tapes posted normally in first mailing with other material.

No new tapes will be produced unless:

i. outline sent to External Studies

ii. consultation has taken place with External Studies and Educational Services

iii. material is correctly recorded

iv. all deadlines are met.

Existing tapes will be systematically reviewed to upgrade their quality where necessary.

With regard to the storage, reproduction and distribution of tapes, it is important that:

i. uniform and consistent labelling be adhered to

ii. records be kept of the status of each tape (i.e. where it is in the system, when it originated etc.)

iii. return procedures are regularised.

Identification of Tapes

To assist in the retrieval and reproduction of audio-tapes, each tape should be labelled with the following information:

1. Subject code.
2. Number in sequence.
3. Descriptive title.
4. Originator.
5. Date of Production of Revision.

AUDIO TAPES FOR DISTANCE EDUCATION

SUPPLEMENTARY MATERIAL

ITEM 1

Content

Introduction

A Model for Audio Tapes

Factors Influencing the Use of Audio Tapes

The Production of Audio Tapes

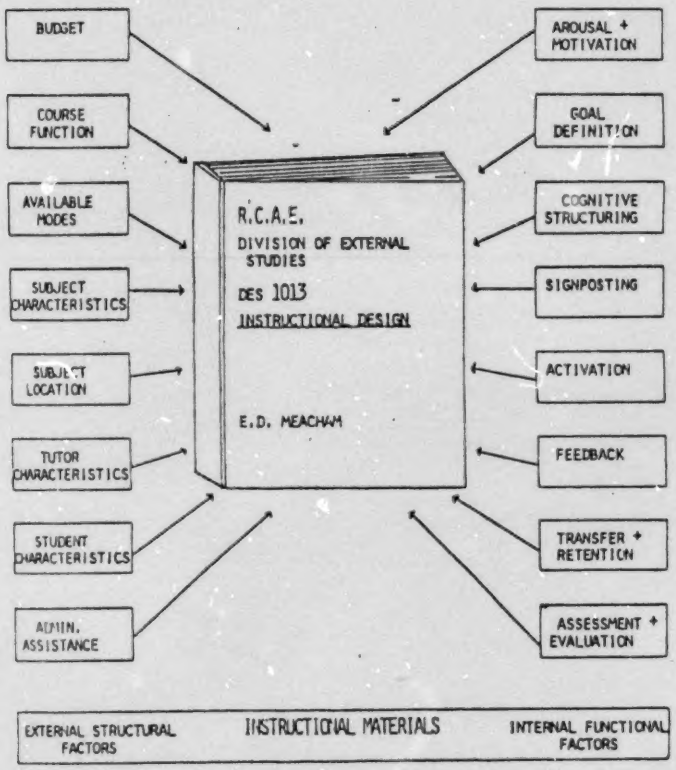
The Evaluation of Audio Tapes

Conclusion

ITEM 2

OUTLINE MODEL OF MAJOR DESIGN

CONSIDERATIONS FOR CORRESPONDENCE MATERIALS



ITEM 3

Automatic level recording has advantages and drawbacks. An electronic circuit is arranged so that loud and soft noises within a certain volume range will all be recorded adequately - the machine amplifies very soft sounds and dampens loud sounds all to an acceptable level. An advantage of this is that if the speaker moves his head away from the microphone, or waves about a handheld microphone while speaking, then the variations in sound level will be lessened by the machine. Also, several speakers at different distances from the microphone can speak in turn and all will be recorded adequately. A drawback is that during a silence longer than the circuit's response time, any quiet sounds in the background - central heating pumps, traffic and bird noises outside, children playing - will all be amplified to an intrusive level, and tape hiss will be more noticeable. The first few words of the next speaker will then be recorded at a very high volume until the machine adjusts the recording level. It is important not to begin these new sections with explosive consonants like b's, p's and t's.

AUTOMATIC LEVEL RECORDING has its advantages and drawbacks . . . . .

An electronic circuit is arranged so that loud and soft noises within a certain volume range will be recorded adequately . . . . .

The machine amplifies very soft sounds and dampens loud sounds to an acceptable level . . . . . .

An advantage of this is that if the speaker moves his head away from the microphone, or waves about a hand-held microphone while speaking, then . . . the variations in sound level will be lessened by the machine . . . . . .

Also . . . several speakers at different distances can speak in turn and all will be recorded adequately.

ITEM 4

SELF-ASSESSMENT QUESTIONS

These should be answered as they are encountered in the tape.

Give your answers in the spaces provided.

If you cannot give appropriate answers with some confidence, then re-examine the relevant part of the accompanying notes.

(a) Can audio tapes largely replace print? Justify your answer.

(b) To what extent is the use of audio tapes based on their effectiveness as a teaching medium?

(c) In what ways could you use audio tapes to advantage?

(d) How does a script for an audio tape differ from a learned article?

(e) How would you evaluate an audio tape which you had made?

Sample script marked ready to read.

AUDIO TAPES FOR DISTANCE EDUCATION

Hello, I'm Brian Butler an Education Officer at Riverina College. Dave Meacham and I have produced this tape to assist lecturers in producing audio tapes for external students distance teaching.

We have titled this material 'Audio-Tapes for Distance Education' and it covers:

A model for distance education,

Guidelines for the use of audio-tapes,

The production process,

Evaluation of audio-tapes, and

the production schedule.

Before dealing with these specific topics, let's consider some general points. Enthusiasts claim you can teach anything from neuro-surgery to gnome painting by using audio-tapes. This may be so from a theoretical point of view, but given the current state of the art I would prefer not to be the client of an orally-instructed neurosurgeon.

Audio-tapes should be used selectively/ and when appropriate be accompanied by other materials.

So it is to everyone's advantage/ to be able to make informed decisions about suitable media/ and to produce audio-tapes of an appropriate standard when required.

Bearing in mind this aim/ after listening to this tape and reading the accompanying written materials/ you should be able to:

Appreciate the range of factors influencing the use of audio-tapes./

Distinguish between their appropriate and inappropriate use./

Produce tapes of an acceptable standard,/ and,

Evaluate audio-tapes with regard to their effectiveness.//

The content of this tape can be seen from item one of the supplementary material.

You can see that the end of each section is marked by an activity or self-assessment questions, which you should attempt as soon as they are referred to.

So, STOP the tape at the end of each section and complete the questions, DO NOT LEAVE THEM UNTIL THE END.

> Now stop the tape and attempt the first self-assessment question, which is Item 4a in the supplementary material provided.

Pause 2 secs.

The first matter you should be aware of/ concerns the factors influencing the use made of audio-tapes for correspondence students.

A comprehensive range of relevant factors is shown in the model illustrated in the accompanying supplementary materials. The model is titled (Item 2) and should be referred to, so make sure it's in front of you.

The main points to note are that;

- A variety of factors may influence the use of audio-tapes.

  Some of them have more to do with organisational structures and personal competencies rather than with theories of effective teaching.

  Any choices made should be linked with structural, and pedagogical or teaching considerations.

  For example, its not much use devising a method of teaching which is theoretically sound, but involves a disproportionate demand on scarce resources.

What you actually achieve in this area usually involves the 'Art of the Possible'.

Now attempt the next self-assessment question, which is numbered 4b.

Pause 2 seconds.

If the use of an audio-tape is considered appropriate, then the problem remains of how to make an appropriate tape.

To find the answer you should take a closer look at the pedagogical factors portrayed in your example.

The tape you produce should arouse the interest of your students, motivate them to learn, set out the structure of the material, define what is expected of students and how they may best achieve it, involve the students in some activities and allow them to deduce what kind of progress they are making.

If you can do all this, and handle the problem of selection of content competently, I'd be confident of your success in producing effective tapes.

Many people ask 'when should audio-tapes be used'?

Well to answer this, some of the advantages and disadvantages need to be pointed out . . .

Would you reply on audio-tape alone to communicate important dates and detailed instructions, complex formulae and spatial descriptions?

I hope your answer was no, as it should be obvious that it is difficult to refer to

specific information on tape, and it is also difficult to deduce meaning from context, as scanning is impossible.

However, if you wish to make an emphatic personalised communication, portray a dialogue, or describe visually-presented material which is already in the hands of the students, then audio-tapes may well represent the best media choice.

So, don't use audio-tapes for long monologues, complex factual material or information which needs to be constantly referred to.

Consider carefully how tapes could be used effectively to personalise material, represent discussion or debate, summarise and explain printed information, and evaluate student performance.

Oh a word of warning

Should you wish to include pre-recorded sound to illustrate, highlight, or just set the mood for your tape, remember that commercially-produced material, including radio and television broadcasts are copyright and you must obtain permission before using ~~any~~ of this ~~material~~.

Now pause for a moment and complete Question 4c.

Pause 2 seconds

OK, so you have decided that you want to use a tape!

Well, 'How do I make it?' will probably be the next question you ask yourself.

The obvious answer is to prepare it like a lecture with few notes and a great deal of ad libbing. Unfortunately, although such methods may be fine in an interactive learning situation, they seldom work in the case of one-way communication, where no questions can be immediately answered and no supplementary information given in response to particular difficulties. So, almost always a script will be necessary.

You will probably have had little experience of script writing, but if you have a clear grasp of your material it ~~should not~~ shouldn't prove too difficult. Try to script a personal conversation between you and the student, not an impersonal, remote commentary. After all, you're talking to a single student about something of interest and importance. You must Write for speaking, not reading, so use fairly straightforward spoken

language, and set out your script in a way that assists the spoken presentation. By this, we mean use plenty of spacing, underlining, unorthodox emphatic punctuation, etc. The script is not for reading it is for speaking, so you must present it in any way which makes its intentions clear. Stop the tape and have a look at the two examples provided in the supplementary material where they are labelled Item 3. Which of the examples helps the speaker more?

Sounds pure

If we assume that you can present your material in an interesting, accurate, informative, yet personal conversational style, then the next concern is the actual structure of the materials. It's a good idea to include in every unit of learning, an introduction, a statement of objectives, logically divided content, questions and requests for responses, and a summary of important ideas. Also a clear explanation of technical terms is helpful, especially if included in accompanying printed material.

It's important to think carefully about what printed materials will complement your tape: charts, diagrams, maps, formulae, photographs and so on, obviously require some

visual representation, but there are some items best provided in print form.

Statements of interest and objectives, references, glossaries of terms, self-testing exercises ~~and so on~~. are a few examples.

The important thing is to decide how different media may complement each other in getting your ideas across.

Now
Think about the comments above and now answer Question 4d.

Pause 7 seconds.

Now that your material is appropriately scripted and structured, what else must be considered?

Well now we're at the recording stage of our production.

Now
I have assumed that full technical facilities are available to you . . . including

a technical operator to adjust recording levels and operate the equipment.

At this stage of your development you will hae plenty to think about without worrying about technicalities.

However, there's one technical aspect which you can't ignore, and that's microphone technique.

The microphone most commonly used for voice work in a studio has a cardiod directional characteristic, ~~it has~~ it's been designed to be most sensitive in one direction only. This helps your communication by minimising extraneous noises from within or outside of your studio.

The microphone ~~I am~~ I'm using is a typical studio mic., and I have positioned it approximately 200 mm from my face, with its axis pointing a little below my mouth . . . more towards my chin. Let's investigate the various problems involved with <u>incorrect</u> microphone position or technique.

The microphone is a sensitive device, designed to respond to variations in air pressure <u>not</u> to violent blows or winds.

DO NOT blow into/ or tap on the microphone to test it.

Microphones are designed to work at a specific distance from the sound source/ this one is average/ approximately 200 mm is correct./ A close position say 60 mm away will sound soft and sexy/ certainly not natural/ it is also very prone to popping particularly on sibilants.

If you work too far from the microphone - I am now about a metre away - your recording will include sound modified by the room acoustics/ you will also/ due to the extra gain required to get the same loudness/ pick up more extraneous noise such as air conditioning.//

Back to my normal position/ and my final demonstration. I have now turned my head away from the axis of the microphone/ the effect you are now hearing is simply described as being 'off mic'. Obviously, correct positioning of your notes/enabling you to read without moving your head too far/will alleviate this problem.

Of course these and other effects can when fully understood, be used to advantage/ but these and other advanced techniques /are best

demonstrated in a workshop. Perhaps we can meet and discuss ~~these~~ them some time soon.

~~If possible~~ it's ~~better~~ for you to record your ~~own material~~. As you wish to make ~~it as~~ personal as possible, and more importantly only you can convey the subtle emphases or even doubts surrounding your ideas. — when ever possible you should record your own material.

Bear in mind you are speaking to one person, not giving a mass lecture, and you should try to vary your delivery and pacing to give emphasis to the most essential [illegible].

It's important to sound knowledgeable, enthusiastic and approachable. You should speak to inform not impress.

Anyway, have a go and if you're not happy with the result, a more experienced staff member may be available to present your material for you.

It's not unusual for very effective face-to-face lecturers to fail to come across on tape, so don't think you are unusual if on your first attempt you're not happy with your performance.

Now let's assume the tape has been made. The smart question to ask is, <u>was it worthwhile</u>?

or put another way <u>did it help the students learn?</u>

To answer this, we need some kind of evaluation procedure.

You could try two approaches, first ask the students directly and then ask a variety of people involved to rate your material against a checklist of theoretically desirable attributes.

You will find an example in your notes

~~Turn to your notes to see an example.~~

If you use the findings of such an evaluation, you will then be in a better position to improve your audio material if necessary.

Now please turn to Question 4c in the supplementary material and answer it.

All of this seems very involved and complicated, but it isn't really. Please consider:

The need for audio-tapes in your subject.

Your ability to prepare them.

The help you can receive; and

A realistic schedule for their production.

There is an important place for this medium in distance education. Its potential has yet to be realised, so it may have considerable advantages for your subject.

By the way, here are some suggested answers to the self-assessment questions.

Audio-tapes should be complementary to other media presentation, a variety of media helps learning and some subjects or elements of them are much more appropriately dealt with on audio-tape than others are.

Teaching effectiveness is an important consideration in choosing to use an audio-tape but available resources and personal competencies must also be considered. You should never ~~made~~ make media choices out of context.

The ways you could use audio-tapes will obviously vary from situation to situation, but dialogue, description, debate and personalisation are some things to consider.

The basic difference between a script and an article is that one is to be spoken and one is to be read. This has certain implications for both style and written presentation.

The main techniques of evaluation would involve judgements by peers and students, and comparison with theoretical models of effective teaching. It might be helpful to finish off by using the checklist in the accompanying notes to evaluate this tape. Any suggestions for improvement will be most welcome.

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